IN THE CLAIMS

Please cancel claim 1.

Please add the following new claims 30-95:

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30. (New) A method for configuring a control sequence in an imaging system including a plurality of independently controllable subsystems, and control circuitry for commanding activities of the subsystems, the method comprising the steps of:

defining a component module including instructions for executing an activity of at least one subsystem and a time boundary for execution of the activity;

integrating the component module into a control sequence; and

coordinating at least a portion of the control sequence based on the time boundary.

31. (New) The method of claim 30, wherein the at least one subsystem includes a coil set for producing a magnetic field in a subject of interest.

32. (New) The method of claim 31, wherein defining the component module comprises providing instructions for producing a desired pulse in the coil set.

33. (New) The method of claim 32, wherein defining the component module comprises time masking the desired pulse to prevent activity temporally conflicting with the desired pulse.

34. (New) The method of claim 30, wherein defining the component module comprises time masking activities of a plurality of components.

35. (New) The method of claim 34, wherein time masking comprises simultaneously time masking independent activities of the plurality of components over at least one activity interval.

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36. (New) The method of claim 30, wherein defining the component module comprises providing instructions for defining leading and trailing edges of the time boundary.

37. (New) The method of claim 30, wherein defining the component module comprises facilitating user control of the duration of the time boundary.

38. (New) The method of claim 30, wherein integrating the component module comprises coordinating the time boundary with independent activities and adjusting time gaps between at least a portion of the independent activities based on the time boundary.

39. (New) The method of claim 30, comprising time optimizing acquisition of image data.

40. (New) A method of enhancing operations of a medical diagnostic system, the method comprising:

integrating a control module into a medical diagnostic system, wherein the control module is configured to organize activities based on time boundaries defining the activities; and

coordinating an organized activity assembly of a control operation for the medical diagnostic system utilizing the control module.

41. (New) The method of claim 40, wherein integrating the control module comprises disposing the control module on a storage medium accessible by the medical diagnostic system.

42. (New) The method of claim 40, wherein coordinating the organized assembly comprises temporally coordinating a plurality of time masked activities of the

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control operation and, wherein the time masked activities are time masked by the control module

43. (New) The method of claim 42, wherein temporally coordinating the plurality of time masked activities comprises coordinating a plurality of components of the medical diagnostic system.

44. (New) The method of claim 40, wherein coordinating the organized assembly comprises temporally orienting an activity within the organized activity assembly based in part on a temporal edge of a time boundary for the activity.

45. (New) The method of claim 44, wherein temporally orienting the activity comprises temporally orienting a control pulse disposed within the time boundary.

46. (New) The method of claim 44, wherein temporally orienting the activity comprises conformingly fitting modular time borders that define intervals of control activity.

47. (New) The method of claim 46, wherein conformingly fitting modular time borders comprises shielding the intervals of control activity from overlap based on the modular time borders.

48. (New) The method of claim 46, wherein conformingly fitting modular time borders comprises coordinating multiple sets of independent control signals for the medical diagnostic system.

49. (New) The method of claim 48, wherein the independent control signals correspond at least partially to independent axes for data acquisition by the medical diagnostic system.

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50. (New) The method of claim 40, comprising defining time boundaries about sets of independent control signals for an acquisition assembly of the medical diagnostic system, and temporally adjusting the sets of independent control signals according to the time boundaries, wherein the time boundaries define exclusive time durations for each of the independent control signals.

51. (New) The method of claim 40, comprising optimizing temporal sequencing within the organized activity assembly of the control operation based on unique time modules defining activities of the organized activity assembly.

52. (New) The method of claim 40, comprising operating the medical diagnostic system and producing diagnostic output based on utilization of the control module.

53. (New) The method of claim 52, wherein producing diagnostic output comprises generating image data for a subject diagnosed by the medical diagnostic system, the medical diagnostic system comprising an image acquisition assembly.

54. (New) A method of coordinating a plurality of activities of a diagnostic system, the method comprising:

sequencing a plurality of activities for a diagnostic system;

coordinating at least one activity of the plurality of activities based on a time boundary defining the at least one activity;

55. (New) The method of claim 54, wherein sequencing the plurality of activities comprises sequencing control signals for a plurality of acquisition subcomponents for the diagnostic system.

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56. (New) The method of claim 55, wherein sequencing control signals comprises coordinating control of independent data acquisition axes for an image acquisition assembly of the diagnostic system.

57. (New) The method of claim 55, wherein coordinating the at least one activity comprises defining unique edges of the time boundary for each of the control signals.

58. (New) The method of claim 54, wherein coordinating the at least one activity comprises defining a modular time block having the time boundary for non-interferingly assembling the at least one activity into a time enhanced activity sequence.

59. (New) The method of claim 58, comprising defining a plurality of the modular time blocks for a plurality of activities.

60. (New) The method of claim 58, wherein defining the modular time block comprises masking a set of independent activities.

61. (New) The method of claim 59, wherein coordinating comprises geometrically assembling the plurality of modular time blocks to form a desired sequence.

62. (New) The method of claim 58, wherein coordinating comprises providing an excess time for the at least one activity within the modular time block, the excess time at least partially based on performance characteristics of the diagnostic system.

63. (New) The method of claim 59, comprising graphically displaying indicia of the plurality of activities and modular time blocks.

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64. (New) The method of claim 58, comprising facilitating user interaction via a user interface coupled to the diagnostic system.

65. (New) A sequencing system for activities of a medical diagnostic system, the sequencing system comprising:

a storage medium accessible by a medical diagnostic system; and

a sequencing program disposed on the storage medium, the sequencing program comprising:

an analysis routine for analyzing an electronic indicia of an activity;

a boundary generation routine for calculating a boundary for the electronic indicia based on results from the analysis routine; and

a coordination routine for assembling an activity sequence based on results from the boundary generation routine.

66. (New) The system of claim 65, wherein the sequencing program has configuration parameters adapted for temporally coordinating a control sequence of activities for image acquisition components of the medical diagnostic system.

67. (New) The system of claim 65, wherein the electronic indicia comprise a signal for a control assembly for at least partially controlling the medical diagnostic system.

68. (New) The system of claim 65, wherein the boundary includes leading and trailing edges for time masking the electronic indicia.

69. (New) The system of claim 68, wherein the boundary generation routine is configured for defining a plurality of modular activity blocks having boundaries, each of the modular activity blocks being disposed about the electronic indicia of at least one independent activity.

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70. (New) The system of claim 69, wherein the coordination routine has a geometric fit routine for assembling the plurality of modular activity blocks according to the boundaries.

71. (New) A medical diagnostic system having components for performing functions of a diagnostic sequence, the medical diagnostic system comprising:

a data acquisition assembly for a medical diagnostic system;

a control assembly coupled to the data acquisition assembly; and

a sequencing module accessible by the control assembly, the sequencing module including boundary definition and coordination modules for facilitating a time optimized acquisition sequence.

72. (New) The medical diagnostic system of claim 71, wherein the time optimized acquisition sequence has at least two activity modules temporally juxtaposed based on time boundaries defining activity regions of at least two independent activities of the control assembly.

73. (New) The medical diagnostic system of claim 71, wherein the data acquisition assembly comprises image acquisition components.

74. (New) The medical diagnostic system of claim 73, wherein the image acquisition components include a component for producing data representative of an image.

75. (New) The medical diagnostic system of claim 71, wherein the control assembly comprises a control circuit coupled to the data acquisition assembly, the control circuit being configured to command activities of independent components of the data acquisition assembly in accordance with the time optimized acquisition sequence generated by the sequencing module.

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76. (New) The medical diagnostic system of claim 71, wherein the time optimized acquisition sequence comprises a plurality of time masked activities assembled in a desired order and temporal spacing according to temporal boundaries encompassing each of the plurality of time masked activities.

77. (New) The medical diagnostic system of claim 71, wherein the data acquisition assembly includes coil sets for a plurality of axes, and wherein the time optimized acquisition sequence includes instructions to control activities associated with at least two axes of the plurality of axes.

78. (New) The medical diagnostic system of claim 77, comprising an activity time boundary having unique temporal edges masking an activity therebetween.

79. (New) The medical diagnostic system of claim 78, wherein the unique temporal edges are adapted to varyingly surround a set of separate control signals.

80. (New) The medical diagnostic system of claim 71, wherein the control assembly includes instructions for generating pulsed emissions from at least one component of the data acquisition assembly.

81. (New) A time organization system for data acquisition, the system comprising:

a medical diagnostic system having a control assembly; and

a time analysis and integration module accessible by the control assembly for generating a modularly assembled sequence of operations desired by the control assembly.

82. (New) The time organization system of claim 81, wherein the medical diagnostic system comprises image acquisition components.

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83. (New) The time organization system of claim 82, wherein the image acquisition components include coil sets for producing magnetic fields for a plurality of independent axes.

84. (New) The time organization system of claim 81, wherein the control assembly includes instructions for generating pulsed activity associated with at least one of the plurality of independent axes.

85. (New) The time organization system of claim 84, wherein the control assembly is configured for simultaneous operation of data acquisition components associated with at least two of the plurality of independent axes.

86. (New) The time organization system of claim 81, wherein the modularly assembled sequence of operations comprises a plurality of time boundaries defining independent activities associated with the control assembly.

87. (New) The time organization system of claim 86, wherein the plurality of time boundaries have leading and trailing edges defining each activity region of the independent activities.

88. (New) The time organization system of claim 87, wherein the modularly assembled sequence of operations juxtaposes at least two of the plurality of time boundaries to reduce undesirable lag time between successive trailing and leading edges.

89. (New) The time organization system of claim 86, wherein the plurality of time boundaries are time masked to prevent temporal interference among the independent activities.

90. (New) An image produced by the method of claim 30.